

Supplemental Digital Content 6. Categorical outcomes: Mortality, Unplanned repeat hospitalizations, Necrosis, Wound dehiscence, Delayed healing, Seroma, and Hematoma

Study, Year, PMID, Country	Design	Overall RoB	Outcome	Outcome Description	Time Point	IBR n/N (%)	AR n/N (%)	Adjusted Odds Ratio (95% CI) for AR vs. IBR	P Value
Jiang, 2013, 24349366, US	NRCS	High	Mortality	Overall mortality	8.9 y	241/1412 (17.1)	503/2649 (19.0)	0.96 (0.89, 1.04)	NR
	NRCS	High	Mortality	Breast cancer-specific mortality	8.9 y	209/1412 (14.8)	432/2649 (16.3)	0.95 (0.87, 1.04)	NR
Merchant, 2015, 26111325, US	NRCS	High	Unplanned repeat hospitalizations	Any unplanned readmission	1 mo	338/10437 (3.24)	95/2329 (4.08)	1.07 (0.95, 1.20)	NR
Mioton, 2013, 23562485, US	NRCS	Moderate	Unplanned repeat hospitalizations	Any unplanned readmission	1 mo	172/3960 (4.34)	56/1052 (5.32)	NR	NS
Nasser, 2018, 30204678	NRCS	High	Unplanned repeat hospitalizations	Unplanned ED visits	1 mo	NR/28124 (NR)	NR/4773 (NR)	1.11 (0.91, 1.25)	0.18
	NRCS	High	Unplanned repeat hospitalizations	Unplanned ED visits with pain-related diagnosis	1 mo	NR/28124 (NR)	NR/4773 (NR)	1.11 (0.83, 1.67)	0.41
Abedi, 2016, 25003437, Canada	NRCS	High	Necrosis	Mastectomy flap necrosis	1.6-1.9 y	70/606 (11.6)	60/395 (15.2)	0.66 (0.38, 1.16)	0.15
de Araujo, 2016, 27673527, US	NRCS	High	Necrosis	Major mastectomy flap necrosis	4.3 y	NR/38 (NR)	NR/32 (NR)	17.9 (0.52, 610.5)	0.11
Naoum, 2020a, 31756414, US	NRCS	High	Necrosis	Mastectomy flap necrosis	4-10 y	26/633 breasts (4.1)	16/342 breasts (4.7)	0.83 (0.19, 3.50)	0.8
	NRCS	High	Necrosis	Fat necrosis	4-10 y	1/633 breasts (0.2)	24/342 breasts (7.0)	21.2 (2.5, 174.5)	0.004
Woo, 2018, 30360958, South Korea	NRCS	High	Necrosis	Mastectomy flap necrosis	NR	14/60 (23.3)	7/70 (10)	0.31 (0.11, 0.86)	0.02
Brorson 2020a, 32807615, Sweden	RCT	High	Thromboembolic events	DVT	1 mo	0/66 (0)	0/51 (0)	No events	N/A
	RCT	High	Thromboembolic events	PE	1 mo	1/66 (1.5)	0/51 (0)	Not calculable (no events in AR group)	Not calculable
Tallroth, 2020, 3346336, Sweden	RCT	Moderate	Thromboembolic events	DVT	1 mo	1/28 (3.6)	0/42 (0)	Not calculable (no events in AR group)	Not calculable
	RCT	Moderate	Thromboembolic events	Arterial stop	1 mo	0/28 (0)	2/42 (4.8)	Not calculable (no events in IBR group)	Not calculable

	RCT	Moderate	Thromboembolic events	Venous stasis	1 mo	0/28 (0)	6/42 (14.3)	Not calculable (no events in IBR group)	Not calculable
Mioton, 2013, 23562485, US	NRCS	Moderate	Thromboembolic events	DVT	1 mo	27/9786 (0.28)	20/3296 (0.61)	0.99 (0.41, 2.41)	NR
	NRCS	Moderate	Thromboembolic events	PE	1 mo	17/9786 (0.17)	17/3296 (0.52)	1.84 (0.71, 4.77)	NR
Momeni, 2018, 29095189, US	NRCS	High	Thromboembolic events	DVT or PE	3 mo	65/16851 (3.85)	815/4622 (17.63)	2.27 (1.79, 2.86)	NR
Garvey, 2012, 23096600, US	NRCS	Moderate	Wound dehiscence	NR	NR	28/442 breasts (6.3)	25/548 breasts (4.6)	NR	0.25
Mioton, 2013, 23562485, US	NRCS	Moderate	Wound dehiscence	Wound disruption	1 mo	44*/9786 (0.44)	41*/3296 (1.24)	1.79 (0.83, 3.84)	NR
Fischer, 2013, 23629074, US	NRCS	High	Delayed healing	Delayed breast wound healing	NR	9/60 (15)	52/142 (36.6)	2.2 (1.0, 5.2)	0.06
Garvey, 2012, 23096600, US	NRCS	Moderate	Delayed healing	NR	NR	19/442 breasts (4.3)	41/548 breasts (7.5)	NR	0.01
Fischer, 2014, 24916480, US	NRCS	High	Seroma	Breast seroma	1.8-2.1 y	13/155 (8.1)	4/155 (2.8)	NR	0.009
Garvey, 2012, 23096600, US	NRCS	Moderate	Seroma	Breast seroma or hematoma	NR	61/442 breasts (13.8)	27/548 breasts (4.9)	NR	<0.001
Fischer, 2014, 24916480, US	NRCS	High	Hematoma	Breast hematoma	1.8-2.1 mo	4/155 (2.4)	4/155 (2.8)	NR	1.0

Abbreviations: AR = autologous reconstruction, CI = confidence interval, DVT = deep vein thrombosis, ED = emergency department, IBR = implant-based reconstruction, N/A = not applicable, NR = not reported, NRCS = nonrandomized comparative study, PE = pulmonary embolism, PMID = PubMed identifier, RoB = risk of bias, y = years.